



Sent in advance by FAX (5 pages)
European Patent Office

80298 Munich

Fritz Pfister
Dept. ARI

Munich, January 13, 2006

International Patent Application: PCT/DE2005/000438

Title: "Rotary Friction Welding Process and Rotary Friction Welding Machine with Measurement of the Relative Position and Compression between the Components being Connected to One Another"

Applicant: MTU Aero Engines GmbH

In response to the written notice from the International Searching Authority (Rule 43 through 1 PCT) dated July 27, 2005:

It is obvious that the original set of claims is not tenable in view of the prior art from Documents D1 through D4. However, the applicant is of the opinion that there are features remaining, which meet the criteria of "novelty" and "inventive step."

Measuring the relative position of the components being connected and releasing the stationary component for rotation once a pre-specified relative position has been reached is known from D1. Compression as a criterion for release is not taken into consideration in this case.

D2 disclosed measuring the compression of the components being connected and ending the friction welding process by delaying the rotational movement when a pre-specified compression is reached. The component that is initially stationary is kept stationary until the end of the welding process and **not** released for rotation.

Document D3 does **not** deal with the topic of rotary friction welding.

It is known from D4 that when reaching a pre-specified relative position (angularity), the relative rotation between two components (bodies) is to be set back to the value "zero," which can be accomplished by stopping both components or by adjusting the rotational speed. In this state a final angle correction can take place, wherein one component must be freely rotatable relative to the other. Finally, compression or more precisely re-compression of the correctly positioned components takes place.

MTU Aero Engines GmbH
Postfach 50 08 40
80978 München - Deutschland
Lieferanschrift:
Dachauer Straße 665
80995 München - Deutschland
Tel. +49 89 1489-0
Fax +49 89 1489-5500
www.mtu.de

Sitz der Gesellschaft:
München
Handelsregister:
München HRB Nr. 154230
Steuernr.: 817/59039
USt-IdNr.: DE238391310
Bankverbindung:
Commerzbank AG, München
Bankleitzahl 700 400 41
Konto 220 400 600

Geschäftsführer:
Udo Stark, Vorsitzender
Bernold Kessler
Dr. Michael Süß
Reiner Winkler
Vorsitzender des Aufsichtsrats:
Johannes P. Huith

Tel. +49 89 1489-3064
Fax +49 89 1489-5947
Ref. P804816/WO/1



Fritz Pfister
Dept. ARI

Document D1 is considered the closest prior art. In our opinion, it is not obvious to those skilled in the art to combine the teaching of Document D2 (measurement of the compression) with the teaching of D1 since, according to D2, the stationary component is in no case released into a rotating state.

Therefore, attached a new set of claims henceforth with 10 patent claims is being submitted, in which case independent Claims 1 and 8 are restricted with respect to the state of the art known from D1. In these claims that are formulated in two parts only, the additional release criterion of the pre-specified and measured compression is cited in the characterizing portion. The comments in the notice about Section VIII were taken into account in the formulation of the claim, which is the reason why the original Claims 11 and 12 have been dropped.

All changes can be seen from the attached original handwritten corrected version (corrections in red).

MTU Aero Engines GmbH

A handwritten signature in black ink, appearing to read 'Pfister'.

Pfister

AV48977

Enclosures:

Claims 1 through 10 (3 pages, one copy) by fax and mail

Corrections in red (3 pages, original) by mail only